

# IMPROVED SIGNALING SYSTEM FOR TELECOMMUNICATIONS

## Abstract

A pair of devices (400, 401) appear to be a Common Channel Signaling (CCS) network nodes on each end of a point-to-digital data link, that is, a normal CCS signaling link (402, 403). Multiple transport methods may be used to provide a redundant and diverse path for the signaling link. These methods include the encapsulation of the CCS protocol, at one or more layers, within other network protocols. In another embodiment, the present invention implements a virtual Signal Transfer Point by means of one or more encapsulating STPs (eSTPs). A packet data network (408) using standard packet data protocols, rather than a backplane bus or special network, connects the encapsulating STPs (405, 406), and CCS messages are dynamically routed across the internal packet data network to an appropriate eSTP for transmission to the appropriate next hop address. The entire group of eSTPs appears to be one STP to the CCS network, but on the internal packet data network each eSTP operates as an autonomous message router for CCS traffic.